

REMARKS

Claims 1-11 are all the claims pending in the application. Applicant has added new claims 9-11 to more particularly define the invention. Claims 1-8 stand rejected on prior art grounds. Applicant respectfully traverses the prior art rejections based on the following discussion.

I. The Prior Art Rejections

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lewis et al. (US Pat. 6,422,512) in view of Schneider and Kalberer et al. (US Pat. 5,547,149).

A. The Rejection Based on Lewis in view of Schneider and Kalberer, et al. ('149')

First, at least three (3) references have been "kluged" together in an attempt to disclose Applicant's invention.

Regarding independent claims 1 and 7, and related claims 2-6 and 8, first, the references, separately, or in combination fail to disclose, teach or suggest a reason or motivation for being combined. Indeed, Lewis and Kalberer relate to aircraft ejection seats, whereas Schneider relates to automotive airbag technology. Since pilots are ejected upward out of aircraft in a vertical direction, whereas automotive drivers are generally not ejected upward after an impact, but may move forward in a horizontal direction, the Lewis and Kalberer references do not disclose or suggest applying the disclosed aircraft technology to automobiles. Accordingly, there is no motivation to combine these references. (See Lewis at Abstract, and Column 1, lines 10-17; Schneider at Abstract, and Column 1, lines 5-10; and Kalberer at Abstract, and Column 1, lines 20-30).

Second, even assuming that the references would have been combined, Lewis does not disclose, teach or suggest the features of independent 1, including providing an airbag module mounted to a bottom surface of an instrument console located in the

cockpit of the aircraft. Similarly, Lewis also does not disclose, teach or suggest the features of independent claim 7, including the airbag module is mounted on a rear surface of the instrument console and flush with the bottom surface of the instrument console. (See Page 4, lines 1-3; Page 5, lines 10-15; and Figures 3, 5A and 5B).

Indeed, Applicant agrees with the Examiner that Lewis "fails to show that the airbag module for protecting the lower limbs as being positioned on an instrument panel." Further, Figure 6 of Lewis merely discloses an inflatable restraint system 38 for protecting an aircrew member in an aircraft seat 32 during ejection, including inflatable tubular members 44, 46, which position a sheet member 58 to form a shield around the aircrew member 30 and the aircraft seat 32. Please note, the inflatable tubular members 44, 46 extend from a central tubular member 42, which is part of the aircraft seat 32 not an instrument console. Accordingly, Lewis does not disclose or suggest any airbag module mounted to an instrument console, let alone, providing an airbag module mounted to a bottom surface of an instrument console located in the cockpit of the aircraft. Similarly, Lewis does not disclose or suggest that the airbag module is mounted on a rear surface of the instrument console and flush with the bottom surface of the instrument console. Therefore, Lewis is structurally deficient in not disclosing Applicant's claimed invention. (See Office Action, Page 2, Section 2; Lewis, Column 2, lines 17-56; Column 3, lines 55-65; Column 4, lines 7-12; lines 45-57; and Figures 3, 4 and 6).

Schneider is also deficient.

In contrast, Figure 1 of Schneider merely discloses an inflatable knee airbag system 10 for an occupant 12 seated in a front seat 14 in an automobile, not an aircraft like Applicant's invention. Contrary to the assertion in the Office Action, the knee airbag system 10 is mounted to the lower portion of an instrument panel 18, not mounted to a bottom surface of an instrument console in an aircraft cockpit. In particular, the knee airbag system 10 is clearly attached to a side surface of the lower portion of the instrument panel 18 of an automotive vehicle. Indeed, the knee airbag system 10 is "in front of the occupant's knees and lower legs," not above the toes and lower limbs as taught by Applicant's invention. Please note, placement of the knee airbag system 10 in front of the occupant's knees is consistent with the forward, that is, relatively horizontal,

direction an occupant would move in the event of an accident, whereas Applicant's aircraft pilot is ejected substantially vertically upward requiring placement of the airbag above the lower limbs to prevent toe strike. Accordingly, Schneider is structurally distinct and teaches away from Applicant's invention. Therefore, Schneider does not disclose, teach or suggest, including providing an airbag module mounted to a bottom surface of an instrument console located in the cockpit of the aircraft. Schneider also does not disclose, teach or suggest that the airbag module is mounted on a rear surface of the instrument console and flush with the bottom surface of the instrument console. (See Schneider, Column 3, lines 30-62; and Figure 1).

In comparison, Figures 1-5A of Applicant's invention discloses a method, and related apparatus, for mitigating toe strike in a cockpit 20 of an aircraft. The structural features include an instrument console 14 with an airbag module 24 mounted to a bottom surface 15 of the instrument console 14, where an airbag 26 in the airbag module 24 deploys helping to deflect the feet 18 and legs of a pilot 10 down and away from the instrument console 14 while the pilot 10 is ejected, thus minimizing "toe strike." For emphasis, Schneider discloses the knee airbag system 10 is clearly attached to a side surface of the lower portion of the instrument panel 18 of an automotive vehicle, whereas Applicant discloses that the airbag is mounted to the bottom surface 15 of the instrument console 14 in an aircraft. (See Page 3, line 30-Page 4, line 22; and Figures 1-5A).

Kalberer ('149) is also deficient.

In contrast, Figure 1 as well as Figure 2 of Kalberer merely disclose an aircraft airbag protection apparatus, including airbag storage and actuating assemblies 20, 21 attached to yokes 11, 12 or an instrument panel. In particular, Figure 2 clearly discloses that the airbag storage and actuating assemblies 20, 21 are situated on a top or a side surface of the yoke 11 and based on this configuration the airbag's forwardly-directed lobe 22 engages the aircraft's front wall 18 approximately when the full extension of the rear-facing lobe 23 engages "the front of the pilot, or occupant in seat 15." Accordingly, Kalberer does not disclose or suggest providing an airbag module mounted to a bottom surface of an instrument console located in the cockpit of the aircraft. Similarly, Kalberer does not disclose or suggest that the airbag module is mounted on a rear surface of the instrument console and flush with the bottom surface of the instrument console.

Therefore, Kalberer is also structurally deficient in not disclosing Applicant's claimed invention.

Thus, Applicant traverses the assertion that Lewis, Schneider and Kalberer teach Applicant's invention.

For at least the reasons outlined above, Applicant respectfully submits that none of Lewis, Schneider and Kalberer, alone or in combination, disclose, teach or suggest, including providing an airbag module mounted to a bottom surface of an instrument console located in the cockpit of the aircraft. Further, none of the references disclose, teach or suggest that the airbag module is mounted on a rear surface of the instrument console and flush with the bottom surface of the instrument console.

For the reasons stated above, the claimed invention, and the invention as cited in independent claims 1 and 7, and related dependent claims 2-6 and 8, are fully patentable over the cited references.

II. Formal Matters and Conclusions

In view of the foregoing, Applicants submit that claims 1-11, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayment to Attorney's Deposit
Account Number 50-1114.

Respectfully submitted,

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Fredric J. Zimmerman
Registration No. 48,747

Office of Counsel Code OC4
Naval Surface Warfare Center
Indian Head Division
101 Strauss Ave., Bldg. D-31
Indian Head, MD 20640-5035